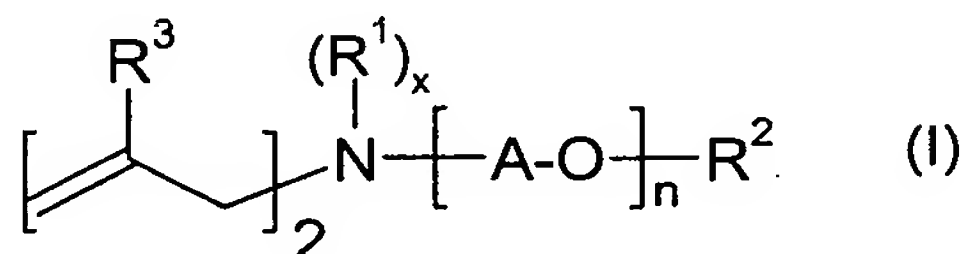


What is claimed is:

1. A polymer comprising, as monomeric building blocks,

5 a) at least one diallylamine of the general formula I (monomer A) in neutral or quaternized form



where

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A-O is C<sub>1</sub>-C<sub>12</sub>-alkylene oxide, styrene oxide or any mixtures thereof,

n is an integer from 2 to 200,

x is 0 or 1,

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R<sup>1</sup> is hydrogen, C<sub>1</sub>- to C<sub>20</sub>-alkyl, C<sub>2</sub>- to C<sub>20</sub>-alkenyl, C<sub>5</sub>- to C<sub>10</sub>-cycloalkyl or an optionally substituted benzyl radical,

R<sup>2</sup> is hydrogen, C<sub>1</sub>- to C<sub>30</sub>-alkyl, C<sub>5</sub>- to C<sub>8</sub>-cycloalkyl, C<sub>6</sub>- to C<sub>20</sub>-aryl, C<sub>1</sub>- to C<sub>30</sub>-alkanoyl, C<sub>7</sub>- to C<sub>21</sub>-aroyl, sulfuric (half-) esters, phosphoric esters, amino or ammonium,

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R<sup>3</sup> may be identical or different and is hydrogen, C<sub>1</sub>- to C<sub>20</sub>-alkyl, C<sub>2</sub>- to C<sub>20</sub>-alkenyl, C<sub>5</sub>- to C<sub>10</sub>-cycloalkyl or aryl,

b) at least one ethylenically unsaturated monomer (monomer B) chosen from the group consisting of

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i. N-vinyl lactams,

ii. N-vinyl amides,

iii. N-vinylimidazoles,

iv. N,N-diallyl amines different from monomer A, and any mixtures of these monomers or salts thereof,

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c) if appropriate one or more ethylenically unsaturated monomers C,

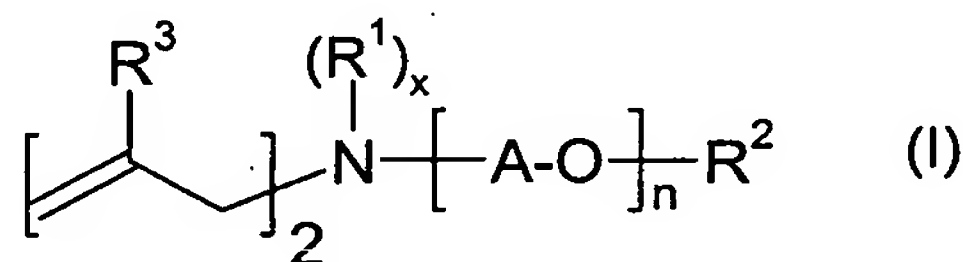
d) if appropriate at least one crosslinker.

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2. The polymer according to claim 1, where monomer B is N-vinylcaprolactam or N-vinylpyrrolidone.

3. The polymer according to at least one of claims 1 to 2, where the weight-average molecular weight M<sub>w</sub> of the polymer is in the range from 1000 to 2 000 000.

4. The polymer according to at least one of claims 1 to 3, where the polymer has a K value of from 20 to 120.
5. The polymer according to at least one of claims 1 to 4, where the monomer mixture to be polymerized comprises
  - a. 1 - 95 mol% of monomer A
  - b. 5 - 99 mol% of monomer B and
  - c. 0 - 50 mol% of monomer C.
6. The polymer according to one of claims 1 to 5, where the polymer comprises 0.01 to 5% by weight of crosslinkers, based on the total amount of the monomers A, B and C.
7. The polymer according to at least one of claims 1 to 6, where the polymer is soluble or dispersible in water.
8. A process for the preparation of the polymers according to one of claims 1 to 7, wherein the monomers A and B and optionally C and optionally a crosslinker are free-radically polymerized.
9. A cosmetic preparation comprising polymers according to one of claims 1 to 7 and further additives customary in cosmetics.
10. A hair care composition comprising polymers according to one of claims 1 to 7 and further additives customary in hair care.
11. The use of polymers comprising, as monomeric building blocks,
  - a) at least one diallylamine of the general formula I (monomer A) in neutral or quaternized form



where

A-O is C<sub>1</sub>-C<sub>12</sub>-alkylene oxide, styrene oxide or any mixtures thereof,

n is an integer from 2 to 200,

x is 0 or 1,

R<sup>1</sup> is hydrogen, C<sub>1</sub>- to C<sub>20</sub>-alkyl, C<sub>2</sub>- to C<sub>20</sub>-alkenyl, C<sub>5</sub>- to C<sub>10</sub>-cycloalkyl or an optionally substituted benzyl radical,

$R^2$  is hydrogen,  $C_1$ - to  $C_{30}$ -alkyl,  $C_5$ - to  $C_8$ -cycloalkyl,  $C_6$ - to  $C_{20}$ -aryl,  $C_1$ - to  $C_{30}$ -alkanoyl,  $C_7$ - to  $C_{21}$ -aroyl, sulfuric (half-) esters, phosphoric esters, amino or ammonium,

$R^3$  may be identical or different and is hydrogen,  $C_1$ - to  $C_{20}$ -alkyl,  $C_2$ - to  $C_{20}$ -alkenyl,  $C_5$ - to  $C_{10}$ -cycloalkyl or aryl,

b) one or more ethylenically unsaturated monomers,

c) if appropriate at least one crosslinker,  
in cosmetic or dermatological preparations.

12. The use according to claim 11, where, as component b), at least one ethylenically unsaturated monomer chosen from the group consisting of

i. N-vinyl lactams,

ii. N-vinyl amides,

iii. N-vinylimidazoles,

iv. N,N-diallyl amines different from monomer A,

and any mixtures of these monomers or salts thereof, is present, in cosmetic preparations or as hair care compositions.

13. A cosmetic composition comprising polymers as defined in claim 12 and further additives customary in cosmetics.